

Reliable off-grid and mobile energy supply

EFOY Pro fuel cells



Reliable energy when far away from the mains grid – this is provided by the EFOY Pro fuel cell. When used as part of off-grid and mobile systems, the fuel cell automatically charges batteries without user intervention – 24 hours a day and under all weather conditions.

The EFOY Pro was specially developed for professional daily use.

- 🔌 100 % reliability and operating safety
- 🔌 Long periods of autonomy, maintenance-free
- 🔌 Remote monitoring possible
- 🔌 Light and compact
- 🔌 Quiet and emission-free

Direct methanol fuel cells

All SFC fuel cells use DMFC (direct methanol fuel cell) technology. Inside the cells, an environmentally-friendly catalytic process directly converts methanol alcohol into electricity, efficiently and without any intermediate steps. This technology is one of the cleanest methods available for generating electricity.

Direct methanol fuel cells are the ideal energy solution for remote and mobile applications.



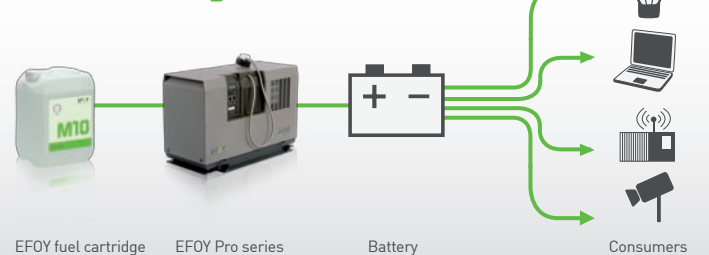
Connect it – switch it on – no worries

The EFOY Pro is an intelligent electricity generator. It is directly connected to the battery supplying your power consumers and automatically recharges it when necessary. The user does not need to look after anything. The user can use the remote monitoring to check that the fuel cell is working properly. The electricity generation is very efficient, quiet and maintenance-free because the process has no moving parts.

100 % availability – weather independent

A perfect solution for ensuring 100% availability is to use the EFOY Pro as a backup system in a solar power station. The fuel cell automatically comes into operation as soon as the solar system is not able to provide enough power. This allows expensive solar systems to be of smaller dimensions and greatly increases the reliability of the system as a whole.

Fuel cell + battery



Precisely stated: The advantages of methanol as an energy source

Methanol as a fuel offers a number of decisive advantages compared to classical fuels:

🔋 Extremely high energy density:

10 l of methanol has a capacity of 11.1 kWh of electricity at a weight of only 7.9 kg – corresponding to about 1,400 Wh/kg.

🔋 Safety tested

EFOY fuel cartridges are designed to the highest levels of safety and carry the TÜV GS seal of tested safety and UN approval for air transport. Their construction ensures that the user can never come into contact with the contents.

🔋 Environmentally-friendly

Methanol can be generated from renewable resources (e.g. from biomass and even household waste), does not damage the ground-water or the ozone layer and exists naturally (in small concentrations) in the environment and the human body.

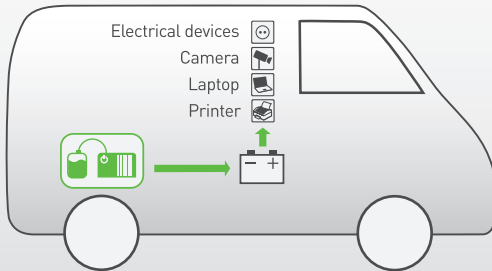


Energy solutions for mobile, temporary and stationary applications

Mobile power supplies

🔋 Low emissions, no heat, no noise

The emissions from an EFOY fuel cell are so low that they protect both the environment and the user in the vehicle. One can work directly next to an EFOY fuel cell in a closed vehicle, safely and for long periods of time. Measuring devices and telecommunication equipment are not influenced or impaired by the EFOY Pro.



🔋 Operation in closed spaces, ideal for concealed use

When hidden in the cargo space of a vehicle the EFOY Pro works silently and invisibly. The vehicle can remain standing for weeks – without any user intervention.

🔋 Quiet and inconspicuous

In operation the EFOY Pro emits a sound level of only 23 dB (A) at a distance of 7 m – this cannot be heard by passers-by, thus reducing the chances of a concealed camera being discovered.

Semi-stationary power supplies

ProCube



🔋 Increased safety for construction site workers

The EFOY Pro fuel cell greatly increases the operating time of (e.g.) traffic control systems. This increases the safety of your employees on construction sites and decreases service costs because the batteries do not need to be replaced.

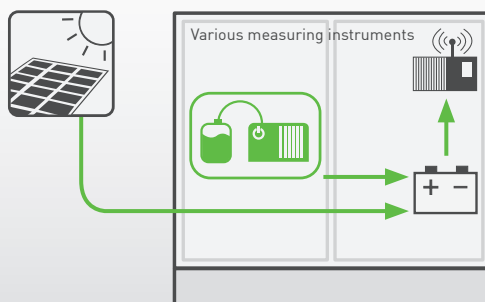


🔋 Quiet, emission-free energy supply for the inner city

The EFOY Pro fuel cell can be used without reservation in the inner city and at night, without the risk of noise emission problems. The only gases emitted are carbon dioxide and water, in quantities about the same as that emitted by a child's breath.

Stationary power supplies

Fuel cell + solar mobile power supply, remotely monitored



🔋 Long periods of autonomy – reliability of supply

The EFOY Pro allows effective catastrophe management and/or continuous data acquisition and availability. The remote monitoring system informs you in time when a fuel cartridge needs to be replaced. This provides you with planning security and you can be sure that your system is running perfectly.

🔋 Significant cost reduction

When combined with a battery, the EFOY Pro greatly extends the autonomy of your applications. On-site visits and the costs associated with recharging or replacing the batteries are significantly reduced.



EFOY Pro Series – tested and certified

Think ahead - New ideas can shape the future

Our fuel cells do duty in a wide variety of applications ranging from recreational uses, through numerous remote industrial applications including electric vehicles, all the way to portable energy solutions for defense.

But we're already thinking about tomorrow. Got an application where today's energy solutions do not fit? Let's talk; we'd be happy to find an energy solution that's tailor-made for your project.

References

100 % off-grid power supply for speed cameras – vandalism-proof installation

„We are convinced of the hybrid fuel cell solar solution for remote operation of speed cameras. After a successful testing phase, our national customer has installed several speed cameras powered by the EFOY Pro fuel cell combined with solar panels on our roadsides with significant benefits. Our customer likes the green energy solution! He benefits from speed control units deployed in the accident-prone places. Constant system availability, full remote control and reduced logistics costs have been the key decision elements for our customer. With the EFOY Pro fuel cell we have found the right solution!”

Roberto Ruiz, Tradeseegur, Spain.

Mobile surveillance cameras for railroads and events – reliable and flexible

„For us, the EFOY Pro fuel cell is the most innovative and cleanest way to supply power to our Mobile Autonomous Camera System (MACS). The fuel cell not only gives us the assurance that the camera will have power in any weather, but it also lengthens service intervals considerably.”

John Polling, CEO of @Xit

Ensured safety – security and fire watch

“Being able to ensure 100 % reliable operation of Sentinelle away from the grid with the EFOY Pro 2200 fuel cell is an important factor for ensuring the broad usability of our new technology in many applications, where security and prevention of danger or theft are critical. We start now with forest fire watch and construction and parking site observation, but there are many more areas, where the availability of our mobile, reliable and flexible off-grid camera system with EFOY Pro fuel cell will make a major contribution to more safety.”

Eric Martin, Managing Director of Altec

Stationary remote power supply for meteorology stations

“UPS Systems is the UK's leading supplier of fuel cells for standby power applications and have broad experience of their use in areas where there is no mains grid access where they have to be relied upon as a prime power source. We believe that fuel cell systems are an ideal solution to this problem as they are both weatherproof and have almost unlimited run times when compared to batteries.”

Tom Sperrey, UPS Systems, GB

Tested safety

From the very beginning, EFOY fuel cells and EFOY fuel cartridges were designed for maximum safety. This is confirmed by numerous certificates.



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